K082368

SEP 1 2 2008

Appendix 2: 510(k) Summary

A. Sponsor

Digirad Corporation
13950 Stowe Drive
Poway, California 92064
Contact Person: Joel Tuckey
Tel: (858) 726-1527
Fax: (858) 726-1700

B. Date Prepared: August 15, 2008

C. Device Name

Trade Name: Cardius-1, Cardius-2, Cardius-3, Cardius 1 XPO, Cardius 2 XPO, Cardius 3 XPO, and 2020tc SPECT Imaging System
Classification Name: System, Emission Tomography

D. Description of Changes

The proposed change involves an updated version of nSPEED^{sm} (3D-OSEM) reconstruction software to process cardiac SPECT studies acquired with non-parallel hole collimators, using half time and/or half count densities. With the updated software, cardiac SPECT studies acquired with both parallel hole and non-parallel hole collimators, using half time and/or half count densities, can be processed.

E. Intended Use

The intended uses of the Cardius series and 2020tc cameras have not changed, and are summarized in the "Indications for Use" form included with this submission.

F. Cleared/Predicate Device

The proposed change is a modification to the following Digirad cleared devices:

(1) 2020tc SPECT Imaging System and the SPECTour Chair (SPECT Imaging System), cleared on November 9, 1998 under 510(k) #K982855; and

(2) Cardius-1 and Cardius-2 SPECT Imaging System cleared on February 5, 2003 under 510(k) #K030085.

(3) Cardius-1, Cardius-2, Cardius-3, and 2020tc SPECT Imaging Systems cleared on July 13, 2005 under 510(k) #K051549

(4) Cardius-1, Cardius-2, Cardius-3, and 2020tc SPECT Imaging Systems cleared on October 4, 2005 under 510(k) #K052430

(5) Cardius 1 XPO, Cardius 2 XPO, Cardius 3 XPO, and 2020tc SPECT Imaging Systems cleared on March 23, 2007 under 510(k) #K070542

G. Conclusions Drawn from Testing

Digirad testing performed with cardiac phantom images and via a multicenter evaluation with data from over 450 patient images acquired with parallel hole and non-parallel hole collimators using Digirad imaging systems show that preferred* time and/or count data processed with previously cleared 2D-OSEM reconstruction technique and half time and/or half count density data processed with nSPEED^{sm} produce equivalent image quality and very good quantitative correlation.

*Preferred time and count refers to times per stop and count density published in the ASNC 2008 Imaging Guidelines.

DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

Food and Drug Administration
9200 Corporate Boulevard
Rockville MD 20850

SEP 1 2 2008

Mr. Joel Tuckey
Vice President Quality
Digirad Corporation
13950 Stowe Drive
POWAY CA 92064-8803

Re: K082368
Trade/Device Name: Cardius-1, Cardius-2, Cardius-3, Cardius 1 XPO, Cardius 2 XPO, Cardius 3 XPO, and 2020tc SPECT Imaging Systems
Regulation Number: 21 CFR 892.1200
Regulation Name: Emission computed tomography system
Regulatory Class: II
Product Code: KPS
Dated: August 15, 2008
Received: August 18, 2008

Dear Mr. Tuckey:

We have reviewed your Section 510(k) premarket notification of intent to market the device referenced above and have determined the device is substantially equivalent (for the indications for use stated in the enclosure) to legally marketed predicate devices marketed in interstate commerce prior to May 28, 1976, the enactment date of the Medical Device Amendments, or to devices that have been reclassified in accordance with the provisions of the Federal Food, Drug, and Cosmetic act (Act) that do not require approval of a premarket approval application (PMA). You may, therefore, market the device, subject to the general controls provisions of the Act. The general controls provisions of the Act include requirements for annual registration, listing of devices, good manufacturing practice, labeling, and prohibitions against misbranding and adulteration.

If your device is classified (see above) into either class II (Special Controls) or class III (PMA), it may be subject to such additional controls. Existing major regulations affecting your device can be found in the Code of Federal Regulations, Title 21, Parts 800 to 898. In addition, FDA may publish further announcements concerning your device in the Federal Register.

Please be advised that FDA's issuance of a substantial equivalence determination does not mean that FDA has made a determination that your device complies with other requirements of the Act or any Federal statutes and regulations administered by other Federal agencies. You must comply with all the Act's requirements, including, but not limited to: registration and listing (21 CFR Part 807); labeling (21 CFR Part 801); good manufacturing practice requirements as set forth in the quality systems (QS) regulation (21 CFR Part 820); and if applicable, the electronic product radiation control provisions (Sections 531-542 of the Act); 21 CFR 1000-1050.

This letter will allow you to begin marketing your device as described in your Section 510(k) premarket notification. The FDA finding of substantial equivalence of your device to a legally marketed predicate device results in a classification for your device and thus, permits your device to proceed to the market.

If you desire specific advice for your device on our labeling regulation (21 CFR Part 801), please contact the Office of Compliance at one of the following numbers, based on the regulation number at the top of this letter:

21 CFR 876.xxx	(Gastroenterology/Renal/Urology	240-276-0115
21 CFR 884.xxx	(Obstetrics/Gynecology)	240-276-0115
21 CFR 894.xxx	(Radiology)	240-276-0120
Other		240-276-0100

Also, please note the regulation entitled, "Misbranding by reference to premarket notification" (21CFR Part 807.97). For questions regarding postmarket surveillance, please contact CDRH's Office of Surveillance and Biometrics' (OSB's) Division of Postmarket Surveillance at 240-276-3474. For questions regarding the reporting of device adverse events (Medical Device Reporting (MDR)), please contact the Division of Surveillance Systems at 240-276-3464. You may obtain other general information on your responsibilities under the Act from the Division of Small Manufacturers, International and Consumer Assistance at its toll-free number (800) 638-2041 or (240) 276-3150 or at its Internet address http://www.fda.gov/cdrh/industry/support/index.html.

Sincerely yours,

Joyce M. Whang, Ph.D.
Acting Director, Division of Reproductive,
Abdominal, and Radiological Devices
Office of Device Evaluation
Center for Devices and Radiological Health

Enclosure

Indications for Use
510(k) Number (if known): TBD
Device Name:
Cardius-1, Cardius-2, Cardius-3, Cardius 1 XPO, Cardius 2 XPO, Cardius 3 XPO, and 2020tc SPECT Imaging Systems

Indications for Use:

Cardius-1, Cardius-2, Cardius-3, Cardius 1 XPO, Cardius 2 XPO, Cardius 3 XPO Imaging Systems:

The Cardius product models are intended for use in the generation of cardiac studies, including planar and Single Photon Emission Computed Tomography (SPECT) studies, in nuclear medicine applications.

2020tc SPECT Imaging System:

The Digirad 2020tc SPECT Imaging system is intended for use in the generation of both planar and Single Photon Emission Computed Tomography (SPECT) clinical images in nuclear medicine applications. The Digirad SPECT Rotating Chair is used in conjunction with the Digirad 2020tc Imager™ to obtain SPECT images in patients who are seated in an upright position.

Specifically, the 2020tc Imager™ is intended to image the distribution of radionuclides in the body by means of a photon radiation detector. In so doing, the system produces images depicting the anatomical distribution of radioisotopes within the human body for interpretation by authorized medical personnel.

Prescription Use ✓ (Part 21 CFR 801 Subpart D)
AND/OR Over-The-Counter Use _____ (21 CFR 801 Subpart C)

(PLEASE DO NOT WRITE BELOW THIS LINE-CONTINUE ON ANOTHER PAGE OF NEEDED)

Concurrence of CDRH, Office of Device Evaluation (ODE)

(Division Sign-Off)
Division of Reproductive, Abdominal and Radiological Devices
510(k) Number K082368